Electromechanical starters
Empty non-metallic enclosures
Accessories and spare parts

Lovato electric

4

Empty enclosures

M…PA

M…RA

M…N

new

Order code	Contactor type ❶	Thermal relay ❷	Degree of protect.	Qty per pkg	Wt
				n°	[kg]
Enclosures with Start-Stop/Reset pushbuttons.					
M0PA	BG06, BG09, BG12	RF9	IP65	1	0.490
M1PA	BF09A, BF12A, BF18A	RF38	IP65	1	0.545
M2PA❸	BF25A, BF26A BF32A❸	RF38	IP65	1	0.715
M25PA❸❹	BF38A❸	RF38	IP65	1	0.990
M3PA❸❺	BF50, BF65, BF80, BF95, BF110❸	RF95 3	IP65	1	1.900
Enclosures with Reset pushbutton.					
M0RA	BG06, BG09, BG12	RF9	IP65	1	0.445
M1RA	BF09A, BF12A, BF18A	RF38	IP65	1	0.500
M2RA❸	BF25A, BF26A BF32A❸	RF38	IP65	1	0.670
M25RA❸❹	BF38A❸	RF38	IP65	1	0.970
M3RA❸❺	BF50, BF65, BF80, BF95, BF110❸	RF95 3	IP65	1	1.850
Enclosures without external pushbuttons.					
M0N	BG06, BG09, BG12	RFA9	IP65	1	0.405
M1N	BF09A, BF12A, BF18A❸	RF38	IP65	1	0.460
M2N❸	BF25A, BF26A BF32A❸	RF38	IP65	1	0.640
M24N❸❹❻	BG.../ BF09A…BF25A❸	❷	IP65	1	0.625
M25N❸❹	BF38A❸	RF38	IP65	1	0.940
M3N❸	BF50, BF65, BF80, BF95, BF110❸	RF95 3	IP65	1	1.800

❶ To be purchased separately; refer to page 2-4 for contactor choice.
❷ To be purchased separately.
    Refer to pages 3-2 to -6 for thermal overload relay choice.
    For use of the overload relay in the M24N, consult Customer Service; see contact details on inside front cover.
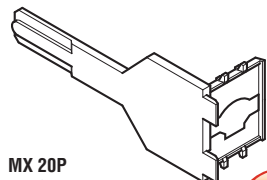❸ Reversing contactor assemblies BGR…, BGT…, BFA…42 and changeover types BGC… can also be fitted in M24N and M25… types. See pages 4-4, 4-13 and 4-15.
❹ MX 31 metal mounting plate included.
❺ MX 30 metal mounting plate included.
❻ To install eventual pushbuttons, selectors and/or other control accessories, use the PLatinum series and mount the relay contact elements on the cover using the LPX AU120 mounting adapter. See section 7.

Accessories and spare parts

MX 20P
MX 21P

new

Order code	Description	Qty per pkg	Wt
		n°	[kg]
MX 01	Threaded plug for unused holes, grey RAL7035	10	0.007
MX 10P	Stop/Reset button extension rod for M0 enclosure	5	0.010
MX 11P	Stop/Reset button extension rod for M1 enclosure	5	0.010
MX 12P	Stop/Reset button extension rod for M2 enclosure	5	0.010
MX 20P	Mounting base for LPX C... contact on M0 enclosure	5	0.014
MX 21P	Mounting base for LPX C... contact on M1, M2, M25 enclosure	5	0.014
MX 30	Metal mounting plate for M3N	1	0.500
MX 31	Metal mounting plate for M24N and M25 enclosures	1	0.400

Enclosure type	Maximum operating current (≤440V)
	A
M0...	12
M1...	18
M2...	32
M24N	38
M25...	38
M3...	110

General characteristics
Enclosures are supplied with the following accessories:

Accessory		Type of enclosure							
Description	Type	M0 PA	M1 PA	M2 PA	M25 PA	M0 RA	M1 RA	M2 RA	M25 RA
Contact holder	MX 20P	1							
	MX 21P		1	1	1				
Buttons: - Start/Reset - Start	LPC B1176					1	1	1	1
	LPC B2104	1	1	1	1				
	LPC B1113	1	1	1	1				
Contact for Start button	LPX C10	1	1	1	1				
Stop/Reset button extension	MX 10P	1				1			
	MX 11P		1				1		
	MX 12P			1	1			1	1
Unused hole threaded plug	MX 01					1	1	1	1

– M3 PA enclosure: 2 Start and Stop/Reset pushbuttons, 2 G285 auxiliary terminals and 1 MX30 mounting plate
– M3 RA enclosure: 1 Reset pushbutton, 2 G285 auxiliary terminals and 1 MX30 mounting plate
– M3N enclosure: Supplied without accessories to be purchased separately including MX 30 mounting plate.

Enclosures can house the following devices:
M0 = BG… with/without RF9
M1 = BF09A-BF12A-BF18A with/without RF38
M2 = BF25A-BF26A-BF32A, assemblies BFA…42 with/without RF38
M24N = BF25A-BF26A-BF32A, assemblies BGR/BGT/BGC and BFA…42 without overload
M25 = BF26…BF38A, assemblies BGR/BGT/BGC and BFA…42 with/without overload
M3 = BF50…BF110 and all assemblies with/without overload.

Operational characteristics:
– Cable entry:
  • M0/M1//M2… - 2 knockouts PG13.5/M20 on enclosure top and bottom
  • M24N/M25… - 2 knockouts PG16/M25-PG29/M32 on enclosure top and bottom
  • M3… - Smooth surfaces; can be drilled by customer
– Ambient conditions:
  • Operating temperature: -25...+60°C
  • Storage temperature: -40...+70°C
– Degree of protection: IEC IP65 for all; UL Type 1, 12, 4/4X for M0/M1/M2/M24N/M25… types and M3…UL versions.

Special M3… versions
In addition to standard-indicated versions, cULus certified starters and enclosures are available up to 52A - motor control and 65A general use rating max (MX30 plate, earth/ground and neutral terminal plates are always included in this case).
Add suffix **UL** to the order code of enclosures e.g. M3N **UL**.

Certifications and compliance
Certifications obtained: EAC for all; for M3NUL type, UL Listed for USA and Canada (cULus – File E300050) as Industrial control panels; for M0/M1/M2PA/RA/N and other M3…UL types, UL Listed for USA and Canada (cULus – File E93602) under magnetic motor controllers as Polymeric enclosures - and CSA certified for Canada and USA (cCSAus – File 94157) as Non-metallic enclosures. UL/CSA pending for M24N and M25… types. Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1, UL 508, CSA CS22.2 n°14; UL 508A and CSA C22.1 for M3NUL type.